

In the Claims:

Please amend claims 1-9 and 17 as follows:

1. (Currently amended) An inductance device A coil driving system which supplies a predetermined electric current to an inductance device a coil by changing a pulse width of a voltage applied to said inductance device coil according to a current instruction value, said system comprising:

a current detection section which detects the electric current which flows through said inductance device coil;

a comparison section which compares a detection current value detected by said current detection section with said current instruction value;

a current control section which turns on/off the voltage applied to said inductance device coil according to a comparison result of said comparison section; and

an off time control section which controls an off time for which application of the voltage to said inductance device coil is interrupted, according to the current instruction value,

wherein an inductance of said inductance device coil generates a magnetic field applied to a magneto-optical disk so as to achieve information reproduction therefrom according to a super-resolution technology.

2. (Currently amended) The ~~inductance device~~coil driving system as claimed in claim 1, wherein said off time control section sets the off time such that, as the current instruction value is smaller, the off time becomes longer.

3. (Currently amended) The ~~inductance device~~coil driving system as claimed in claim 1, wherein said off time control section sets the off time such that, as the current instruction value is larger, the off time becomes shorter.

4. (Currently amended) The ~~inductance device~~coil driving system as claimed in claim 1, wherein said off time control section performs bit shift of the current instruction value so as to determine the off time according to a value obtained from thus performed bit shift of the current instruction value.

5. (Currently amended) The ~~inductance device~~coil driving system as claimed in claim 1, further comprising an off time table in which the off time with respect to the current instruction value is stored, and wherein said off time control section determines the off time by referring to said off time table according to the current instruction value.

6. (Currently amended) The ~~inductance device~~coil driving system as claimed in claim 1, wherein said off time control section comprises:
a counter counting clock pulses according to a count value set according to the

current instruction value; and

a voltage application control section controlling application of the voltage to said inductance device according to a count-up output of said counter.

7. (Currently amended) The ~~inductance device~~coil driving system as claimed in claim 6, wherein said off time control section detects a timing at which the detection current value exceeds the current instruction value, and starts counting of said counter at the thus-detected timing.

8. (Currently amended) The ~~inductance device~~coil driving system as claimed in claim 6, wherein said voltage application control section comprises:

a switch section controlling application of the voltage to said inductance device from a power source; and

a flywheel diode causing an electric current generated in said inductance device when said switch section turns from an on state into an off state, to flow into said power source.

9. (Currently amended) An information storage apparatus which applies a magnetic field according to an electric current based on a current instruction value to a recording medium and performs at least one of recording/reproducing/erasing of information to/from said recording medium, comprising:

a magnetic field application section which applies the magnetic field according to the electric current flowing therethrough to the recording medium;

a current detection section which detects the electric current which flows through said magnetic field application section;

a comparison section which compares a detection current value detected by said current detection section with said current instruction value;

a current control section which turns on/off the voltage applied to said magnetic field application section according to a comparison result of said comparison section; and

an off time control section which controls an off time for which application of the voltage to said magnetic field application section is interrupted, according to the current instruction value,

wherein an inductance of said inductance devicecoil generates a magnetic field applied to a magneto-optical disk so as to achieve information reproduction therefrom according to a super-resolution technology.

10. (Original) The information storage apparatus as claimed in claim 9, wherein said off time control section sets the off time such that, as the current instruction value is smaller, the off time becomes longer.

11. (Original) The information storage apparatus as claimed in claim 9, wherein said off time control section sets the off time such that, as the current instruction value is larger, the off time becomes shorter.

12. (Original) The information storage apparatus as claimed in claim 9, wherein said off time control section performs bit shift of the current instruction value so as to determine the off time according to a value obtained from thus-performed bit shift of the current instruction value.

13. (Previously presented) The information storage apparatus as claimed in claim 9, further comprising an off time table in which the off time with respect to the current instruction value is stored, and wherein said off time control section determines the off time by referring to said off time table according to the current instruction value.

14. (Original) The information storage apparatus as claimed in claim 9, wherein said off time control section comprises:

a counter counting clock pulses according to a count value set according to the current instruction value; and

a voltage application control section controlling application of the voltage to said magnetic field application section according to a count-up output of said counter.

15. (Original) The information storage apparatus as claimed in claim 14, wherein said off time control section detects a timing at which the detection current value exceeds the current instruction value, and starts counting of said counter at the thus-detected timing.

16. (Original) The information storage apparatus as claimed in claim 14, wherein said voltage application control section comprises:

a switch section controlling application of the voltage to said magnetic field application section from a power source; and

a flywheel diode causing the electric current generated in said magnetic field application section when said switch section turns from an on state into an off state, to flow into said power source.

17. (Currently amended) An inductance device A coil driving method by which a predetermined electric current is supplied to an inductance device a coil by changing a pulse width of a voltage applied to said inductance device according to a current instruction value, comprising the steps of:

a) detecting the electric current which flows through said inductance device coil;

b) comparing a detection current value detected in said step a) with said current instruction value;

c) turning on/off the voltage applied to said inductance devicecoil according to a comparison result in said step b); and

d) controlling an off time for which application of the voltage to said inductance devicecoil is interrupted, according to the current instruction value, wherein an inductance of said inductance devicecoil generates a magnetic field applied to a magneto-optical disk so as to achieve information reproduction therefrom according to a super-resolution technology.

18. (Original) The method as claimed in claim 17, wherein, in said step d), the off time is set such that, as the current instruction value is smaller, the off time becomes longer.

19. (Original) The method as claimed in claim 17, wherein, in said step d), the off time is set such that, as the current instruction value is larger, the off time becomes shorter.

20. (Original) The method as claimed in claim 17, wherein, in said step d), bit shift of the current instruction value is performed so that the off time is determined according to a value obtained from thus-performed bit shift of the current instruction value.